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A REVISION OF THE PHILIPPINE ELEGANT
TITMOUSE (*PARUS ELEGANS*)

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The titmouse genus *Parus*, in the broad sense currently used, displays a marked tendency toward geographic variation, many if not most of the included species being divided into numerous subspecies. The resident birds of the Philippine archipelago exhibit a strong tendency to develop well-marked races from island to island. With these two tendencies reinforcing one another, it is not surprising to find that one of the most plastic bird species in the Philippines is the Elegant Titmouse (*Parus elegans*). Delacour and Mayr (1946: 217-218) listed no less than nine subspecies of this endemic Philippine species, with the caution that "several possibly are not valid."

Dr. David Snow, who is preparing the section on the family Paridae for the Peters "Check-list of Birds of the World," suggested that in connection with my current studies of Philippine birds I undertake a review of the races of *Parus elegans*. I have therefore assembled over 200 specimens, including six types. This unprecedented series represents virtually all of the existing specimens of *Parus elegans* in North American museums. As will be noted beyond, there are some serious gaps in the available material, but this cannot be remedied without further collecting which may not be done for many years to come. The most unfortunate lack is the series, including three type specimens, formerly housed in the Bureau of Science in Manila, destroyed by fire in 1945.

Specimens were borrowed for this study through the courtesy of the authorities of the following institutions: Academy of Natural Sciences of Philadelphia, American Museum of Natural History, British Museum (Natural History), Chicago Natural History Museum, Minnesota Museum of Natural History, Museum of Comparative Zoology, Museum of Vertebrate Zoology, Royal Ontario Museum of Zoology, United States National Museum, and Yale Peabody Museum. Dr. S. Dillon Ripley also allowed me to use the specimens from the Hachisuka Collection, now in his personal collection. For additional information through cor-

respondence I am indebted to David Snow, Canuto G. Manuel, and D. S. Rabor.

The Elegant Titmouse is the only species of its family to have reached a tropical archipelago. It is widely distributed in the Philippines, from the Babuyan Group in the north to the Sulu Archipelago in the south. Major islands from which the species does not seem to have been recorded include Basilan, Bohol, Catanduanes, Romblon, Sibuyan, Siquijor, and Tablas. Although McGregor (1920: 427) attributes this species to the Samar-Leyte group, I cannot find any records from either of these islands, and the absence of *Parus elegans* from Samar and Leyte is specifically mentioned by Delacour and Mayr (1946: 218). In Palawan *elegans* is replaced by a closely related species, *P. amabilis*; these two and the Chinese *P. venustulus* have sometimes been separated as a genus *Pardaliparus*, but this division is not currently recognized. The close relationship of these three species might best be expressed by considering them to represent a superspecies; they are almost certainly derived from the widely distributed palaearctic *Parus* ("Periparus") *ater*, the Coal Tit.

Size in *Parus elegans* decreases, in general, from north to south. In most of the archipelago this change is rather gradual, but is somewhat more marked at both extremes. The difference in wing length between the largest and smallest males measured was only 11 millimeters, indicating the relative unimportance of size as a principal subspecific character. There is no such obvious cline in any color character throughout the archipelago, although certain groups of subspecies have common color differences from other groups. In general, the aspects of color and pattern which vary geographically, and which are used in subspecific diagnoses are: relative amounts of black, white, gray and yellow in dorsal area; relative intensity of yellow in yellow areas; size of white spots on wings; presence or absence of yellow edges or wash on white spots of wing and tail; size of nuchal spot. There is also some evidence of geographic variation in the amount of sexual dimorphism, but series of the critical races are too small, and the possibility of erroneously sexed specimens too great, to do more than call attention to this phenomenon in the discussions of the pertinent subspecies.

The number of subspecies of *Parus elegans* recognized in the present paper may seem excessive to anyone who has not examined the definitive series I have been able to assemble. I have synonymized two names used by earlier workers, and have erected two additional subspecies. I believe that any further suppression of races would not do justice to the facts; in fact, in the discussion of *P. e. mindanensis* evidence is presented to indicate the probable existence of still another race.

Parus elegans and its near relatives are unusual among the true titmice in possessing a definite sexual dimorphism in color as well as a minor size dimorphism. Descriptions of the various subspecies, beyond, will emphasize the plumage of the male. In general, females have all black areas duller and sometimes (throat) washed with yellow (but not "dark brown" as described by McGregor, 1909: 605). The white tips of wing coverts and tertials are smaller in females, and there is much less white on the dorsum. The yellow of the underparts is duller and sometimes washed with gray, and the remiges (which are much duller than those of the male) are more broadly edged with greenish

or gray in most races. Females average smaller than males. Several of these sexual differences are foreshadowed even in juvenal plumage.

A detailed plumage description of both sexes will be found under the nominate race. The recognized subspecies, however, are given in approximate geographic order, from north to south. All measurements are in millimeters, to the nearest half millimeter. The wing was flattened against the ruler, and the bill measurement is that from the anterior edge of the nostril to the tip. Only adult birds were measured, but the list of "specimens examined" includes birds of all ages. No attempt was made to apply any statistical techniques beyond the arithmetic mean, since so many of the samples were small that such a treatment would be relatively meaningless.

Parus elegans edithae (McGregor)

Pardaliparus edithae McGregor, Philippine Journ. Sci., 2, 1907, p. 294. Type, from Calayan Island, Babuyan Group, in Bureau of Science, Manila, destroyed by fire in 1945.

Characters: Bill longer than that of any other race; wing long, and in sufficient series would probably average longer than other races. All yellows pale and dull; the cheek patches and nuchal spot creamy white rather than yellow. White spots on wing coverts reduced. Anterior dorsum black with little white spotting; posterior dorsum dark greenish gray.

Measurements: wing, 1 ♂, 70; 1 ♀, 68; bill, 1 ♂, 9.5; 1 ♀, 9.5.

Range: Babuyan Group, north of Luzon.

Specimens examined: Calayan, 2; Camiguin, 1.

Remarks: In view of the fact that only two adults were available for measuring, it seems desirable to quote figures given by McGregor (1909: 606) for two different specimens: wing (probably chord) of ♂, 67; of ♀, 63; bill from nostril of ♂, 10; of ♀, 9. With allowance made for the longer measurements of the flattened wing, McGregor's specimens thus agreed well with the two extant adult specimens.

Parus elegans montigenus (Hachisuka)

Pardaliparus elegans montigenus Hachisuka, Orn. Soc. Japan Supplementary Publ. 14, 1930, p. 200. Type (examined), from Haight's Place (2469 meters), 56 km. from Baguio, Mountain Province, Luzon. Formerly in Hachisuka Collection, now in collection of S. Dillon Ripley.

Characters: Nearest *elegans*, but all yellow areas averaging paler. Wing averaging slightly longer than *elegans*. Anterior portion of dorsum more solidly black, less spotted in male, but more spotted than *elegans* in female. Greenish posterior portion of dorsum darker, without any of the bluish-white wash often present in *elegans*. In females this area is grayer, less yellowish green. Nuchal spot in both sexes often elongated posteriorly to the middle of the back. White spots on wings averaging somewhat smaller.

Measurements: wing, 37 ♂, 64.5-72 (67.7); 21 ♀, 61.5-66 (64); bill, 35 ♂, 7.5-9 (8.3); 21 ♀, 7.5-9 (8.2).

Range: Highlands of northern Luzon.

Specimens examined: LUZON: Mountain Province: Baguio, 36; Haight's Place, 8; La Trinidad, 4; Irisan, 8; Mt. Data, 4; Santo

Thomas, 2; Sablan, 1. *Ilocos Norte Province*: Bangui, 1; Nagpratian, 1. *Abra Province*: Massisiat, 2.

Remarks: Delacour and Mayr (1946: 217) ascribe *P. e. elegans* to "Luzon, lowlands," and *P. e. montigena* [sic] to "highlands of Mindoro, Luzon." This is an error. The division on Luzon is on a north-south basis, with *elegans* being the race of southern Luzon both at high and low elevations. In view of the allocation by Delacour and Mayr, special attention was paid to a comparison of the Mindoro sample with *montigenus* and true *elegans*. The Mindoro population is not *montigenus*, but is inseparable from *elegans*.

***Parus elegans gilliardi*, new subspecies**

TYPE, adult ♂, A.M.N.H. no. 459598, collected at Lamac, Bataan Province, Luzon, Philippine Islands, by E. Thomas Gilliard, December 6, 1947.

Characters: Similar to *P. e. elegans* of southern Luzon, but males more strongly washed with yellow dorsally; spots on foreback which are white in *elegans* are yellow in *gilliardi*; yellow of nuchal spot averaging deeper; white tips of wing coverts and tertials averaging larger and, in fresh plumage, with rather well-defined yellow edges; white spots at tips of rectrices averaging larger. Females brighter, more yellowish dorsally than *elegans*, with a larger yellow nuchal spot. The black areas of the female, particularly throat and wings, are more nearly as dark as in the males than is true of *elegans* and most other races of the species. Size averages somewhat larger than *elegans*; bill averages longer than any other race except *edithae*.

Measurements: wing, 6 ♂, 67-70 (68); 5 ♀, 63-67 (64.5); bill, 6 ♂, 8.5-9 (8.9); 5 ♀, 8-9 (8.6).

Range: Known at present only from the Bataan Peninsula of central-western Luzon. It may be presumed that *gilliardi* is the resident race in the entire Zambales-Mariveles chain. Three specimens from Antipolo, Rizal Province (east of Manila and north of Laguna de Bay) appear to be intermediate between *elegans* and *gilliardi*, suggesting the possibility that the latter race may have a wider distribution in central Luzon, south and perhaps also east of the range of *montigenus*, and north of that of *elegans*. Unfortunately the greatest part of the Zambales-Mariveles chain and virtually the entire mountain chain running the length of eastern Luzon are ornithologically unknown, and, in fact, are among the last frontiers for future ornithological discoveries.

Specimens examined: LUZON: *Bataan Province*: Lamac, 5; Mt. Cayapo, 3; Mariveles, 3.

Remarks: In Gilliard's (1950: 473) list of species polytypic on Luzon, he omitted *Parus elegans*, although the northern subspecies *montigenus* has been accorded general recognition. The only species which Gilliard considered to have an endemic race in the Zambales-Mariveles subregion of Luzon was *Nectarinia sperata*, in which he named *N. s. thereaseae* from Lamac, Bataan. However, in his description of the latter race, Gilliard (1950: 500) admitted that *thereaseae* represents a population both geographically and morphologically intermediate between the northern *N. s. henkei* and the southern *N. s. sperata*. Salomonsen (1953: 255) showed that Mariveles birds were inseparable from *sperata*, and believed that the Bataan population rep-

resents "an unstable hybridization zone between *henkei* and *sperata*," and he synonymized *therescae* with the latter.

This left the Zambales-Mariveles subregion with no known endemic subspecies. As Gilliard has pointed out, this is somewhat surprising, as this mountainous area was wholly separated by water from the rest of Luzon until relatively recently, and the general pattern of Philippine zoogeography is such that endemism in this subregion might well be expected. This anticipation is now realized with the discovery that the population of the plastic *Parus elegans* inhabiting Bataan (and presumably the rest of this former island) represents a distinct subspecies. Unlike the case of *Nectarinia sperata*, the Bataan population of *Parus elegans* is *not* intermediate in its characters between the northern (*montigenus*) and southern (*elegans*) races, but represents extreme conditions in certain color characters, as well as averaging larger-billed than either of its neighbors; specifically, it is much yellower than either *montigenus* or *elegans*, although geographically intermediate between *elegans* and the less yellow *montigenus*. It seems highly appropriate to dedicate this attractive new subspecies to its collector.

The effect of wear and fading on the plumage of *Parus elegans* is relatively little for the first few months after the molt. By the end of the year, however, the change in appearance is sometimes quite radical. This is exemplified by two August specimens of *gilliardi* from Mariveles in the U. S. National Museum. In this pair, particularly the male, the yellows are so bleached and the back and flight feathers so worn as to make these specimens unidentifiable on the basis of color, although both exhibit the long bills (9 mm.) of *gilliardi*. A February specimen from Mariveles, however, shows the characters of *gilliardi* to good advantage. Fortunately for the study of *Parus elegans*, few collectors of Philippine birds have been in the field when these birds are in such poor plumage; of more than 200 specimens examined, only 11 July and 4 August adults were found.

Parus elegans elegans Lesson

Parus elegans Lesson, Traité d'Ornith., 1831, p. 456. No locality cited in original description. Type specimen in Muséum National d'Histoire Naturelle, Paris. See below under "Remarks."

Parus quadrivittatus Lafresnaye, Rev. Zool., 3, 1840, p. 129. Type locality "in Manilla aut in India." Type specimen (examined) in Museum of Comparative Zoölogy.

Pardaliparus elegans panayensis Mearns, Proc. U. S. Nat. Mus., 51, 1916, p. 57. Type (examined) from Panay, in U. S. National Museum.

Description: MALE. Top of head and sides of neck glossy black and slight blue reflections; an irregular nuchal spot of light yellow; mantle black with white spots at tips of scapulars and in center; lower back and rump greenish gray with slight yellowish tinge, washed with varying extent of bluish white; upper tail coverts and rectrices black, the latter with triangular white spots at tips; three outer pairs of rectrices with a portion of the outer web white; chin and throat deep velvety black; cheek patch and underparts yellow, grayer along flanks; wings black, with white tips to median and greater coverts forming two wing-bars; secondaries and tertials tipped with white, the tips increasing in size proximally; primaries with very narrow whitish outer margin.

FEMALE. Top of head and sides of neck black, less glossy than male; nuchal spot paler yellow; most of back greenish gray, with some black and a few yellowish white spots in anterior portion; tail and wings as in male, but much duller, more brownish black, and white spots smaller; remiges with narrow but distinct outer margin of greenish or yellowish gray; chin and throat much duller black than male; cheek patch and underparts paler, duller yellow.

Measurements (Luzon specimens only): wing, 19 ♂, 63-69 (65.8); 6 ♀, 62-63.5 (62.7); bill, 18 ♂, 8-9 (8.5); 6 ♀, 8-9 (8.2).

Range: Luzon from the vicinity of Manila, south; Mindoro; Panay.

Specimens examined: No data (type of *Parus quadrivittatus* Lafresnaye), 1. LUZON: Manila, 2. *Rizal Province*: Antipolo, 3 (intermediate toward *gilliardi*); JalaJala, 3; Quisao, 1. *Laguna Province*: Mt. Makiling, 5; Longos, 1. *Tayabas Province*: Aloneros, 2; Tiaong, 2; unspecified, 4. *Albay Province*: unspecified, 1. *Sorsogon Province*: unspecified, 4. "Laguna de Bay," 3. MINDORO: Barawan Peak, Halcon, 7; Ilong Peak, Halcon, 17; Alag River, 3; Mt. Dulangan, 1. PANAY: unspecified, 3.

Remarks: No locality of any sort was given by Lesson with his brief description of *Parus elegans*. Pucheran (1854: 68) redescribed Lesson's type specimen in detail, and stated that it had been presented to the national collection by Dusummier in 1820, and that it had come from the Philippines. According to Hachisuka (1931: 16), Dusummier stayed in Manila; that city is therefore here designated as the type locality of *Parus elegans* Lesson, a restriction necessary in view of the geographic variation in this species in the Philippines in general and in Luzon in particular. Pucheran's description of Lesson's type matches, as far as can be told, the southern Luzon race here called *elegans*.

Peters (1939: 105) pointed out that Lafresnaye's type of his *Parus quadrivittatus* had not been compared with specimens of the various races of *P. elegans*, although Mearns (1916: 59), in his revision, listed *quadrivittatus* as a synonym of *elegans*. I have examined Lafresnaye's type, and find it a good match for adult males of *P. e. elegans*. The type locality of *quadrivittatus* ("in Manilla aut in India") may thus also be safely restricted to Manila.

It was mentioned above that Mindoro birds are not *montigenus*, to which they have been referred by some authors. They match Luzon specimens of *elegans* both in color and in size. Measurements of Mindoro specimens, for comparison with figures from Luzon (above), are as follows: wing, 18 ♂, 64-69.5 (66.2); 8 ♀, 61-65 (62.6); bill, 16 ♂, 8-9 (8.4); 10 ♀, 8-9 (8.3).

The material from Panay is highly unsatisfactory, consisting only of the two males originally seen by Mearns, plus an additional female from the same (Worcester and Bourns) collection acquired by the National Museum at a later date. Mearns compared his "*panayensis*" only with *albescens*, although he had no topotypes of the latter subspecies at hand. Most of the characters described for "*panayensis*" can be matched in *elegans*. Although one of the principal characters used by Mearns was "less black on the upper back," most of the feathers of this critical area are missing in the type of *panayensis*! The other male specimen does, indeed, have less black than the average

elegans, but the difference is relatively minor and may be considered to be a tendency in the direction of *albescens*, the next race to the south of Panay. Until better material is available, therefore, *panayensis* is best considered a synonym of *elegans*.

Parus elegans albescens (McGregor)

Pardaliparus albescens McGregor, Philippine Journ. Sci., 2, 1907, p. 293. Type, from Ticao Island, in Bureau of Science, Manila, destroyed by fire in 1945.

Pardaliparus elegans guimarasensis Mearns, Proc. U. S. Nat. Mus., 51, 1916, p. 58. Type (examined) from Guimaras, in U. S. National Museum.

Characters: Males immediately separable from all other races by the greater amount of white on the dorsum; white spots on anterior part of dorsum large, and a whitish wash extending over the posterior part; white spots on wing coverts much larger; black throat patch somewhat reduced in extent; underparts clearer yellow than *elegans*, with less darkening at flanks. Females with crown and throat patch duller black than *elegans*, the throat patch reduced in extent; anterior part of dorsum with more yellow and less black spotting, and posterior part yellower than *elegans*; spots on wing coverts slightly larger. Size about as in *elegans*.

Measurements: MASBATE: wing, 6 ♂, 64-67 (65.4); bill, 6 ♀, 8.9 (8.5); no females available. GUIMARAS: wing, 2 ♂, 63.5-65.5 (64.5); 1 ♀, 63; bill, 2 ♂, 8; 1 ♀, 8. NEGROS: wing, 14 ♂, 65-69 (67); 8 ♀, 64-66.5 (64.9); bill, 15 ♂, 8.9 (8.3); 8 ♀, 7.5-9 (8.1).

Range: Islands of Ticao, Masbate, Guimaras and Negros.

Specimens examined: MASBATE: Palanoc, 5 unspecified, 1. GUIMARAS, 3. NEGROS: Pula, Canlaon, 10; Canlaon Volcano, 2; Cuernos de Negros, Luzuriaga, 4; Inubungan, Santa Catalina, 4; San Antonio, 2; Naliong, Tolong, 1; Bacolod, 1; Bais, 1.

Remarks: When McGregor described *albescens*, he had before him two specimens from Ticao (not three, as claimed by Hachisuka, 1930: 201) and three from Masbate. As the type he chose one of the Ticao specimens. All of these skins were destroyed in 1945 with the burning of the building housing the Bureau of Science in Manila. I have written to every museum likely to have Philippine specimens in a vain search for additional Ticao material. Dr. Canuto G. Manuel of the Philippine National Museum and Dr. D. S. Rabor of Silliman University have both informed me that they know of no collecting activity on Ticao after McGregor's work there. It is therefore necessary, in the total absence of Ticao specimens of *Parus elegans*, to assign the populations of certain other islands to *albescens* on a more-or-less provisional basis. However, McGregor, the author of *albescens*, considered Ticao and Masbate specimens to be the same, and I have fortunately been able to assemble a series of six specimens from Masbate to use as presumably typical of *albescens* for comparative purposes.

Mearns named his race "*guimarasensis*" on the basis of a single female specimen in the U. S. National Museum. I have no females of *albescens* from Masbate (or, of course, Ticao) with which to compare the type of *guimarasensis*; however, I have been able to locate two males from Guimaras, one each in the American Museum of Natural

History and the British Museum (Natural History). These are indistinguishable from Masbate males, and on this basis *guimarasensis* is considered a synonym of *albescens*.

The arrangement of races and islands given by Delacour and Mayr (1946: 217-218) is apparently based chiefly on the revision by Hachisuka (1930). They assign the races of the central islands as follows: *guimarensis* [sic], Guimaras; *albescens*, Ticao; *visayanus*, Cebu, Masbate, Negros; *panayensis*, Panay. Hachisuka's revision of this species abounds in discrepancies and inaccuracies. He named *visayanus* with a type from Cebu, and assigned Masbate specimens to the new race. The material I have assembled clearly shows that Masbate birds have nothing to do with *visayanus*, and I follow McGregor in calling them *albescens*, as explained above. Hachisuka also assigned Negros and Panay to the range of his *visayanus*, although clearly stating that he had before him only undeterminable juveniles. He recognizes Mearns' race *panayensis*, although if, as Hachisuka claimed, Panay birds "from all probabilities . . . belong to this new form [*visayanus*]," then *visayanus* would obviously immediately fall as a synonym of *panayensis*! Hachisuka included both Cebu and Negros (as well as Ticao) in the range of *albescens*, then, on the following page, proceeded to erect *visayanus* with the type from Cebu! As previously mentioned, he had only juveniles from Negros, which he assigned as probably *visayanus*. This tentative identification has been widely adopted, by Delacour and Mayr and others. However, Negros birds, of which an ample series is available, are *not* the same as Cebu birds and are, in fact, closest to *albescens* where they were placed by Mearns. The assignment of subspecies in the central islands here adopted is much closer to that of Mearns (1916) than to that of any subsequent authors. His concept of *albescens* was largely correct, except that Guimaras birds (of which Mearns saw no males) are now added to *albescens*, and the subsequently-described race *visayanus* is recognized for birds from Cebu.

The Negros population differs slightly from *albescens* of other islands. The extent of white on the dorsum and wings of Negros males averages slightly less. The only female *albescens* available with which to compare Negros birds is the type of "*guimarasensis*;" this is slightly brighter dorsally and slightly more spotted with yellow above than are Negros females. There is also a small average difference in wing length, Negros birds being the larger. None of these differences is sufficient to warrant subspecific separation of the Negros population from *albescens*, and certainly not assignment to *visayanus*.

Parus elegans visayanus (Hachisuka)

Pardaliparus elegans visayanus Hachisuka, Orn. Soc. Japan Supplementary Publ. 14, 1930, p. 201. Type, from Danao, Cebu, in Bureau of Science, Manila, destroyed by fire in 1945.

Characters: Nearest *elegans* (not *albescens* as might be expected on geographic grounds), but males with rump bluish or grayish, without any yellow or greenish tinge; anterior dorsum slightly more heavily spotted with white; white spotting on wings slightly *less* extensive; yellow of cheeks and underparts less intense; flanks markedly grayer, less greenish. The one available female of *visayanus* is very similar to

elegans, differing chiefly in having grayer flanks and slightly less white spotting on the wings. Males differ from *albescens* in having much less white on the dorsum, smaller white spots on the wings, a more extensive black throat patch, and much duller underparts.

Measurements: wing, 4 ♂, 64.5-66.5 (65.1); 1 ♀, 62.5; bill, 4 ♂, 8.9 (8.7); 1 ♀, 8.5.

Range: Known only from Cebu.

Specimens examined: CEBU: Toledo, 4; unspecified, 1.

Remarks: As mentioned above under *albescens*, the Elegant Titmice of various central islands, particularly Negros, have been assigned to *visayanus* by recent authors, but the latter name must be confined to the Cebu population. This accords well with the zoological subdivisions of the Philippines recognized by Worcester, who wrote (in McGregor and Worcester, 1906: 5) "Cebu cannot be recognized as one of the central Philippine group, but must be classified by itself."

The action of Manuel (1956: 320) in designating a "neotype" of *Pardaliparus elegans visayanus* Haehisuka from a locality (in Negros) other than the type locality was unjustified for several reasons. The Colloquium on Zoological Nomenclature in Copenhagen, in recommending that provisions be inserted in the International Rules of Zoological Nomenclature for recognizing neotypes as a category of type specimens, stated (Hemming, 1953: 28): "(1) Neotypes are not to be designated for themselves alone, or as a curatorial routine, but only in exceptional circumstances when they are desirable in the interests of stability. (2) Neotypes are to be designated only in cases (preferably in revisionary work) in which they are relevant and essential to solving a confused zoological problem, such as the confused identities of closely related species for which holotypes are no longer extant." Such necessity is not demonstrated in Manuel's paper, in which no less than 28 "neotypes" are designated for subspecies originally named from the collections of the destroyed Bureau of Science. Further, the Colloquium recommended (p. 29) that neotypes be accepted, provided "that, when the precise locality . . . from which the original holotype or lectotype was obtained is known, the neotype is shown to have come from as near as possible to that locality . . . subject only to the availability of material, and, in no case, to have come from a locality . . . outside the natural range of the species [or subspecies]." Of the 28 "neotypes" designated in Manuel's paper, no less than 12 come from localities other than the original type locality within a major island (Luzon, Mindoro, Negros, Bohol, Mindanao), and three, including the "neotype" of *Pardaliparus elegans visayanus* Haehisuka, are actually from a different island than that of the type locality. This was unfortunate on several counts. In the first place, Cebu (topotypical) material is available of *Parus elegans*, though perhaps not in the Philippine National Museum. In the second place, the assumption that the subspecies found at Cuernos de Negros, Luzuriaga, Negros is identical with that of Cebu is here shown to be erroneous, and Dr. Manuel's "neotype," therefore, *does* come from "outside the natural range of" the subspecies *visayanus*, and can have no standing in nomenclature.

Parus elegans mindanensis (Mearns)

Pardaliparus elegans mindanensis Mearns, Proc. Biol. Soc. Washington, 18, 1905, p. 8. Type (examined) from Mt. Apo (6200'), Mindanao, in U. S. National Museum.

Characters: Males with dorsum heavily washed with yellow, in this respect being nearest *gilliardi*, but decidedly smaller than that race, with more black spotting of the mantle and smaller spots on the wings; white wing spots broadly (rather than narrowly as in *gilliardi*) margined with yellow; differs from all races to the north in having the white areas on the outer margin of the outer rectrices washed with yellow; all primaries and secondaries with well-marked yellow margin to outer web, rather than a partial whitish or grayish margin to primaries only as in *elegans*. I believe the supposed posterior extension of the black throat patch mentioned by Mearns in his original description is an artifact of preparation. Females share with males the general yellowness of the plumage including the spots of wings and tail which are, if anything, yellower than those of the male. In addition there is a strong tendency in females to have the throat patch heavily washed with yellow, giving it an olive-green appearance. In fresh plumage the tips of the black crown feathers may also have greenish tips, giving a faintly scalloped appearance.

Measurements: wing, 10 ♂, 62-66 (63.3); 4 ♀, 60-62.5 (61.6): bill, 10 ♂, 7-8 (7.7); 5 ♀, 7.5-8.5 (7.9).

Range: Mindanao (highlands only? See below).

Specimens examined: MINDANAO: Mt. Apo (various localities), 12; Lake Lanao, 5; Tumadgopt, 2; Ayala, 2; Catagan, 1.

Remarks: Only three adult specimens from relatively low elevations on Mindanao are available; two poor skins, both male, from Ayala and one female from Catagan, 1100 feet. These specimens suggest that further material might well show that *mindanensis* must be restricted to Mt. Apo and vicinity, or at least to the highlands. The two Ayala males have the cheeks and underparts of a deeper, richer yellow than Mt. Apo males, and there is much *less* yellow on the margins of the white wing and tail spots. The single female differs even more strikingly from Mt. Apo females. The crown is blacker and glossier; the throat patch does not have the yellowish wash described above for female *mindanensis*; the underparts, cheeks, and nuchal spot are deeper yellow; there is more black on the anterior portion of the back; and, like the male, there is less yellow edging on white wing and tail spots. This lowland form cannot be placed with any of the more northern races, nor with the next race, *suluensis*, to the south.

Parus elegans suluensis (Mearns)

Pardaliparus elegans suluensis Mearns, Proc. U. S. Nat. Mus., 51, 1916, p. 59. Type (examined) from the Island of Sulu, in U. S. National Museum.

Characters: A very small and rather "hen-feathered" race. There is much less difference in color between the sexes than is the case in other subspecies of *Parus elegans*; males have a few whitish spots on the anterior part of the dorsum which are lacking in females; crown and throat patch of females are slightly duller black, and the under-

parts very slightly paler yellow. The race as a whole is pale with respect to its yellows, the nuchal spot in particular being almost white. The wing spots, which are relatively small, are tinged with yellow, although less so than in *mindanensis*. As in the latter race, males as well as females have both primaries and secondaries prominently edged with yellowish, a character confined to females in the northern races. The female may prove to have a more restricted nuchal spot than the male, although this portion of the plumage is defective in the two available female specimens.

Measurements: wing, 2 ♂, 61-62 (61.5) bill, 3 ♂, 7.5-8 (7.7); 1 ♀, 7.

Range: Presumably most of the Sulu Archipelago; specimens are known only from Sulu (Jolo) and Tawi-tawi.

Specimens examined: Sulu (Jolo), 4; Tataän, Tawi-tawi, 1.

Remarks: Mearns, when describing *suluensis*, had before him only three specimens, all from the island of Sulu. He stated in a footnote (Mearns, 1916: 60): "A form of *Pardaliparus elegans* was collected by Messrs Bourns and Worcester on the island of Tawi Tawi and Bongao. Possibly this may prove to be identical with the Sulu form, but I have not examined these specimens." A single adult male from Tawi-tawi does not differ in any respect from Sulu birds. Most unexpectedly, however, a small series from Bongao, a small island just off the southwestern tip of Tawi-tawi, proves to represent a highly distinctive population. The series, unfortunately, is a very poor one, consisting of two specimens labelled "♀" but almost certainly males, one very worn adult female, and one juvenile female. In view of the striking characters of the Bongao birds, however, and particularly their distinctiveness when compared with the neighboring *suluensis*, and in view of the fact that additional material from Bongao, although greatly to be desired, is not likely to be forthcoming in the near future, I venture to name this race on material which might under other circumstances be deemed inadequate.

Parus elegans bongaoensis, new subspecies

Type, adult "♀," probably ♂, R.O.M.Z. no. 13922, collected on Bongao Island, Sulu Archipelago, Philippine Islands, by Alfred Marche in December, 1884.

Characters: Smallest and darkest of the races of *Parus elegans*. The anterior part of the dorsum of the presumed males has much more black than in the neighboring *suluensis*, and the posterior portion is a blackish green, darker than in any other race. Edgings of remiges less yellowish, more greenish than in *suluensis* or *mindanensis*; white area on outer edge of outer rectrices much reduced in extent; white spots on wings about as in *suluensis*, but slightly smaller and with little or no yellow. The one adult female is a very worn specimen, but obviously a very dark bird with much reduction in white markings even prior to wear. The juvenile female is in good condition, and fortunately a juvenile female of *suluensis* is available for comparison. The specimens of *bongaoensis* is very much blacker on the entire dorsum, and has the white spots on the wing coverts very much reduced. The midventral region is a deeper yellow, contrasting rather sharply with olivaceous flanks.

Measurements: wing, 2 [♂], 56-62.5 (59.2); 1 ♀, 58.5; bill, 2 [♂], 7.5; 1 ♀, 7.

Range: Known only from Bongao Island, southwest of Tawi-tawi, Sulu Archipelago.

Specimens examined: Bongao, 4.

Remarks: The three specimens other than the type were collected, not by Bourns and Worcester, but by Everett. Mearns' statement that Bourns and Worcester had collected *Parus elegans* on Bongao is probably an error, since the latter authors (1894: 39) mention Tawi-tawi but not Bongao, and McGregor (1909: 605) lists only Everett as having collected the species on Bongao; he was probably unaware that Marche had secured it there.

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